Chapter Six
FINANCIAL PLAN

CHANDLER MUNICIPAL AIRPORT
AIRPORT MASTER PLAN

CHAPTER SIX

FINANCIAL PLAN

CHANDLER MUNICIPAL AIRPORT

The analyses conducted in previous chapters evaluated airport development needs based upon forecast activity changes and operational efficiency. However, the most important element of the master planning process is the application of basic economic, financial and management rationale to each development item so that the feasibility of implementation can be assured. The purpose of this chapter, therefore, is to provide financial management information and tools which will help make the master plan achievable and successful.

The presentation of the financial plan and its feasibility has been organized into three sections. First, the airport development schedule is presented in narrative and graphic form. Secondly, capital improvement funding sources on the federal, state, and local levels are identified and discussed. Finally, the chapter presents a cash flow analysis which analyzes the financial feasibility of the recommended capital improvement program (CIP).

AIRPORT DEVELOPMENT SCHEDULES AND COST SUMMARIES

Once the specific needs and improvements for the airport have been established, the next step is to determine a realistic schedule and costs for implementing the plan. This section examines the overall cost of development and presents a development schedule. The recommended improvements are grouped and divided into three planning horizons of short term, intermediate term, and long range. **Table 6A** summarizes the key activity milestones for each planning horizon.

TABLE 6A
Aviation Activity Planning Horizons (Revised)
Chandler Municipal Airport

	Actual	Short Term	Intermediate Term	Long Range
ANNUAL OPERATIONS				
General Aviation				
Local	121,454	135,000	160,000	192,000
Transient	68,738	72,000	90,000	108,000
Total Operations	190,192	207,000	250,000	300,000
BASED AIRCRAFT	254	300	350	450

The short term planning horizons covers items of highest priority as well as items that should be developed as the airport approaches the short term activity milestones. Priority items include improvements related expansion of landside facilities to meet existing and short term demand levels, as well as the extension of Runway 04R-22L. Because of their priority, those items will need to be incorporated into City, Arizona Department of Transportation (ADOT) Aeronautics Division, and Federal Aviation Administration (FAA) programming. To assist in this process, short term projects are scheduled year-by-year over a five year period.

When short term horizon activity levels are reached, it will be time to program for the intermediate term based upon the next activity milestones. Similarly, when the intermediate term milestones are reached, it will be time to program for the long range.

Due to the conceptual nature of a master plan, implementation of capital projects should occur only after further refinement of their design and costs through architectural and engineering analyses. The cost estimates were increased by 30 percent in order to allow for engineering and other contingencies that may be experience by the project. Capital costs in this chapter should be viewed only as estimates subject to further refinement during design.

Nevertheless, these estimates are considered sufficiently accurate for performing the feasibility analyses in this chapter. Cost estimates for each development project listed in **Table 6B** are presented in current (1998) dollars.

SHORT TERM IMPROVEMENTS

As indicated above, the short term horizon is the only development stage

TABLE 6B
Capital Improvement Program (FY1999- FY 2003)
Chandler Municipal Airport

	Total Cost	FAA Share	ADOT Share	Local Share
FY 2000				
1. Pavement Preservation Runway 4R-22L - Phase I	$263,000	$0	$236,700	$26,300
2. Install Gate Entry and PAPI's, Emergency Utility Connection	172,000	0	154,800	17,200
3. Property acquisition (6.6 acres) West of Canal	429,000	390,647	0	38,353
4. Property acquisition (18.5 acres) North of Ryan Road	1,290,000	1,174,674	57,663	57,663
5. Environmental Assessment for Potential Runway Extension	156,000	142,054	6,973	6,973
Subtotal FY 2000	$2,310,000	$1,707,375	$456,136	$146,489
FY 2001				
6. Conduct Storm Drainage Master Plan	$105,500	$96,068	$4,716	$4,716
7. Improve Terminal Area Storm Drainage	264,500	240,854	11,823	11,823
8. Construct Apron from STD Site Toward Armory	1,188,500	0	1,069,650	118,850
9. Property Acquisition South for OFA, RSA, and Road Relocation	1,080,000	983,448	48,276	48,276
10. Heliport Relocation (including fuel and hangar facilities)	1,630,000	1,484,278	72,861	72,861
11. Construct Access Taxiway	449,000	408,859	20,070	20,070
12. Realign Airport Boulevard	710,000	646,526	31,737	31,737
Subtotal FY 2001	$6,144,500	$3,860,033	$1,438,383	$846,083
FY 2002				
13. Construct Maintenance Building	$266,000	$0	$239,400	$26,600
14. Construct Eleven Unit T-hangar*	743,500	0	232,800	510,700
15. Construct Apron	1,208,500	1,100,460	54,020	54,020
16. Realign Queen Creek Road	1,922,500	1,750,629	85,936	85,936
17. Shoulder Work South Portion of Runway 4R-22L	550,000	0	495,000	55,000
Subtotal FY 2002	$4,690,500	$2,851,089	$1,107,156	$732,256
FY 2003				
18. Extend Runway 4R-22L 500 Feet South	$519,000	$472,601	$23,199	$23,199
19. Extend Taxiway B 3,400 Feet South	1,252,000	1,140,071	55,964	55,964
20. Construct Eleven Unit T-hangar*	717,000	0	179,250	537,750
Subtotal FY 2003	$1,771,000	$1,612,673	$79,164	$79,164
FY 2004				
21. Pavement Preservation Runway 4R-22L & Main Apron	$603,500	$0	$543,150	$60,350
22. Property Acquisition North for OFA, RSA (10 acres)	747,000	680,218	33,391	33,391
23. Germann Road Realignment	7,626,500	6,944,691	340,905	340,905
Subtotal 2004	$8,977,000	$7,624,909	$917,445	$434,645
TOTAL FIVE YEAR PROGRAM	**$23,893,000**	**$17,656,079**	**$3,998,284**	**$2,238,637**

* Indicates ADOT loan program.

TABLE 6B (Continued)
Intermediate Term and Long Range Horizon CIP
Chandler Municipal Airport

	Total Cost	FAA Share	ADOT Share	Local Share
INTERMEDIATE TERM PROGRAM				
1. Construct Access Roads (South Apron Access)	$2,258,500	$2,056,590	$100,955	$100,955
2. Extend Runway 4R-22L 1,450 Feet North	1,602,000	1,458,781	71,609	71,609
3. Extend Taxiway B 1,450 Feet North	686,500	625,127	30,687	30,687
4. Extend Taxiway C 500 Feet South	323,500	294,579	14,460	14,460
5. Extend Taxiway C 1,450 Feet North	707,000	643,794	31,603	31,603
6. Construct New Apron North of Ryan Road	2,877,500	2,620,252	128,624	128,624
7. Property Acquisition South for RPZ (42 acres)	3,432,200	3,125,361	153,419	153,419
8. Construct South Side Apron - Phase I	2,278,500	2,074,802	101,849	101,849
9. Property Acquisition North for Transitional Surface (24 acres)	2,017,500	1,837,136	90,182	90,182
10. Construct South Side Apron - Phase II	1,884,500	1,716,026	84,237	84,237
11. Property Acquisition North for RPZ (41 acres)	3,542,700	3,225,983	158,359	158,359
12. Construct South Side Apron - Phase III	1,937,000	1,763,832	86,584	86,584
INTERMEDIATE TERM TOTAL	**$23,547,400**	**$21,442,262**	**$1,052,569**	**$1,052,569**
LONG RANGE PROGRAM				
1. Construct South Side Terminal Roads & Extend Utilities	$2,500,000	$0	$2,250,000	$250,000
2. Construct Hangar Access Taxiways	1,125,000	1,024,425	50,288	50,288
3. Construct 40 T-Hangars*	2,912,000	0	800,000	2,112,000
4. Relocate Segmented Circle	20,000	18,212	894	894
5. Install MALSR Runway 04R	350,000	350,000	0	0
6. Construct 50 T-Hangars *	3,640,000	0	1,000,000	2,640,000
7. Install ODALS Runway 22L	300,000	300,000	0	0
LONG RANGE TOTAL	**$10,847,000**	**$1,692,637**	**$4,101,182**	**$5,053,182**
TOTAL PROGRAM COSTS	**$58,287,400**	**$40,790,98**	**$9,152,035**	**$8,344,387**

that is correlated to time. This is because development within this initial period is concentrated first on the most immediate needs of the airfield and landside areas. Therefore, the program is presented year-by-year for the first five years to assist in capital improvement. **Short term improvements presented in Table 6B are estimated at $23.9million. Development items are also depicted on Exhibit 6A.**

Airside: Many of the projects included in the short term include items necessary to complete a 1,950 foot extension to Runway 04R-22L. Projects necessary to complete the extension of Runway 04R-22L include property acquisition and relocation of Queen Creek and Germann Roads. Also included is a 500-foot southerly extension of Runway 4R-22L and a 3,400-foot extension of Taxiway B. The plan also includes relocation and

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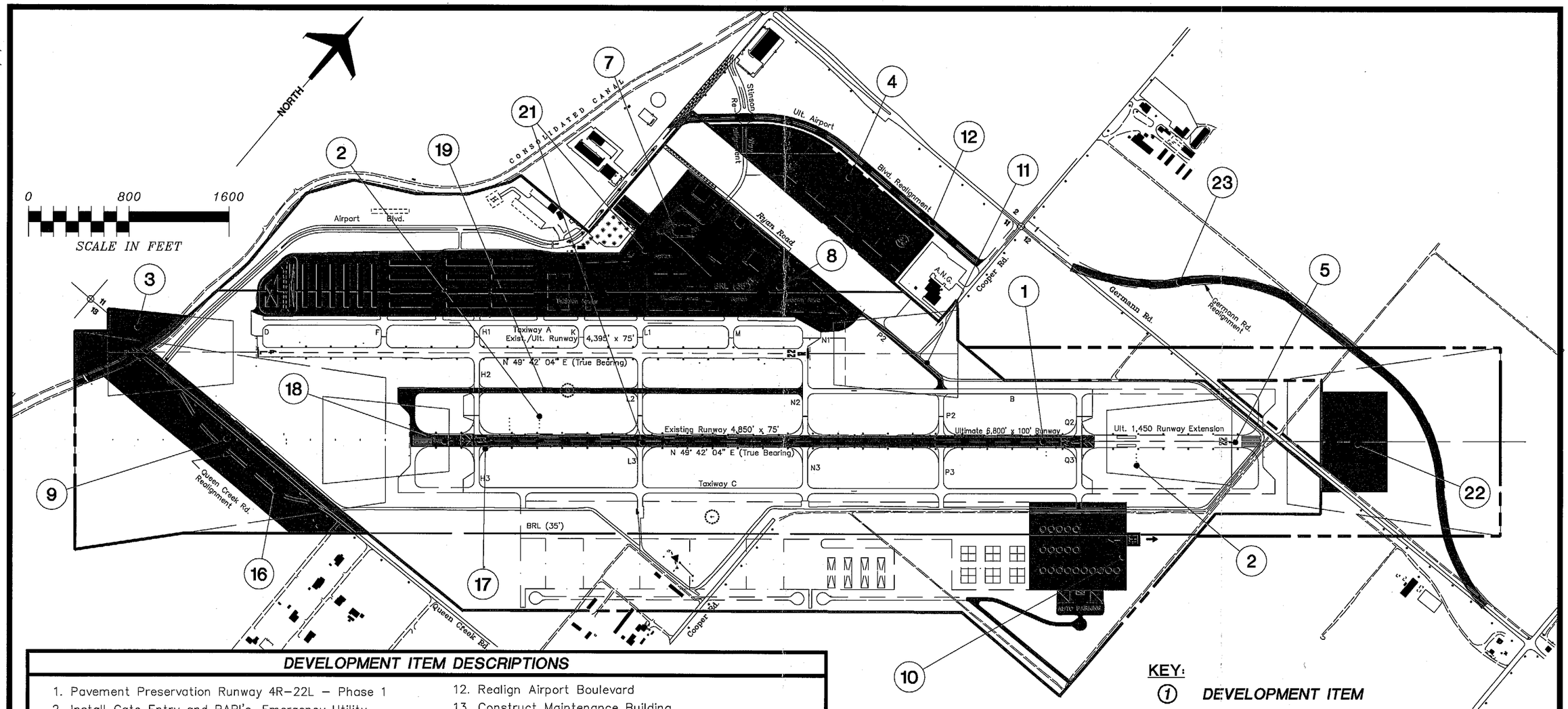

DEVELOPMENT ITEM DESCRIPTIONS

1. Pavement Preservation Runway 4R–22L – Phase 1
2. Install Gate Entry and PAPI's, Emergency Utility Connection
3. Property acquisition (6.6 acres) West of Canal
4. Property acquisition (18.5 acres) North of Ryan Road
5. Environmental Assessment for Potential Runway Extension
6. Conduct Storm Drainage Master Plan
7. Improve Terminal Area Storm Drainage
8. Construct Apron from STD Site Toward Armory
9. Property Acquisition South for OFA, RSA, and Road Relocation
10. Heliport Relocation (including fuel and hanger facilities)
11. Construct Access Taxiway
12. Realign Airport Boulevard
13. Construct Maintenance Building
14. Construct Eleven Unit T–Hanger
15. Construct Apron
16. Realign Queen Creek Road
17. Shoulder Work South Portion of Runway 4R–22L
18. Extend Runway 4R–22L 500 Feet South
19. Extend Taxiway B 3,400 Feet South
20. Construct Eleven Unit T–hangar*
21. Pavement Preservation Runway 4L–22R & Main Apron
22. Property Acquisition North for OFA, RSA (10acres)
23. German Road Realignment

NOTE: Not all development items listed are depicted on this exhibit.

KEY:

(1) *DEVELOPMENT ITEM*

Abbrevations/Acronyms:

BRL – Building Restriction Line
GPS – Global Positioning System
MALSR – Medium Intensity Approach Lighting System
MIRL – Medium Intensity Runway Lighting
MITL – Medium Intensity Taxiway Lighting
PAPI – Precision Approach Path Indicator
RPZ – Runway Protection Zone
R.O.W. – Right–Of–Way

Exhibit 6A
SHORT TERM PLANNING HORIZON IMPROVEMENTS
FY- 2000 THROUGH FY-2004

construction of a heliport on the southeastern portion of the airport.

Landside: Landside development in the short term is aimed at providing additional aircraft storage hangar facilities and aircraft parking apron. In order to accommodate terminal facility expansion on the north side of the airport, land acquisition for the new airport access roadway system and aircraft parking apron is required. Other projects include pavement preservation, construction of an airport operations and maintenance facility, and improvements of storm drainage and navigational aids.

INTERMEDIATE TERM DEVELOPMENT

The intermediate term horizon encompasses development related to accommodating the intermediate activity milestones presented in **Table 6A**. These include improvements that will be triggered by the continued growth of the related sector of activity. The key airside development item anticipated is the 1,450-foot northerly extension of Runway 4R-22L and Taxiways B and C. At this time, the plan also calls for extending Taxiway C 500 feet south.

Landside improvement in the intermediate term planning horizon include the construction of additional aircraft parking apron and T-Hangar facilities. **As presented in Table 6B and depicted on Exhibit 6B, the total cost of intermediate term horizon is estimated at $23.5 million.**

LONG RANGE IMPROVEMENTS

Development projects will ultimately produce an airport capable of accommodating all of the aviation activity and requirements anticipated for the planning period.

Improvements in the long range include construction of T-hangars and aircraft parking apron, and improvement of general aviation roadways on the south side of the airport. **The total cost of development for long range development is estimated at $10.8 million. Exhibit 6C** presents a graphical depiction of planned improvements over the long range planning period.

CAPITAL IMPROVEMENTS FUNDING

Financing capital improvements at the airport will not rely exclusively upon the financial resources of the airport fund of the City of Chandler. Capital improvements funding is available through various grant-in-aid programs on the state and federal levels. The following discussion outlines the key sources for capital improvement funding.

FEDERAL AID TO AIRPORTS

The United States Congress has long recognized the need to develop and maintain a system of aviation facilities across the nation for national defense and promotion of interstate commerce. Various grants-in-aid programs to public airports have been established

over the years for this purpose. The current federal grant-in-aid program is the Airport Improvement Program (AIP) of 1982. AIP has been reauthorized several times with the most recent reauthorization (the Federal Aviation Authorization Act of 1997) extending through federal fiscal year 1998.

The source for AIP funds is the Aviation Trust Fund. The Aviation Trust Fund was established in 1970 to provide funding for aviation capital investment programs (e.g., facilities and equipment, research and development, and grants for airport development and expansion projects). A majority of the FAA's operations account is financed through the Aviation Trust Fund. The Aviation Trust Fund is funded by federal user fees and taxes on airline tickets, aviation fuel, and various aircraft parts.

AIP funds are distributed each year by the FAA under authorization from the United States Congress. Unfortunately, the funding levels authorized in the legislation are not always the levels appropriated in the annual Congressional budget process. In fiscal year 1996, the AIP authorized level was $2.161 billion, but only $1.45 billion was appropriated. In 1997, again more than two billion was authorized, however, only $1.7 billion was appropriated.

Statutory provisions require that AIP funds be apportioned by formula each year to specific airports or types of airports. Such funds are available to airports in the year they are first apportioned and they remain available for the two fiscal years immediately following. Among the recipients of apportioned funds are primary airports, cargo service airports, States and insular areas, and Alaska.

Not more than 49.5 percent of the annual amount made available for obligation may be apportioned to primary and cargo service airports. Of that percentage, 3.5 percent is apportioned to cargo service airports. However, in the event that an amount less than $1.9 billion is made available for obligation under AIP, not more than 44 percent can be apportioned to these airports in accordance with section 47114 of Title 49 U.S.C.

Each primary airport apportionment is based upon the number of passengers enplaning at the airport. The minimum amount apportioned to primary airports is $500,000 once an airport reaches 10,000 enplanements, and the maximum amount is $22,000,000.

A total of 12 percent of the annual amount made available for obligation is apportioned for use at general aviation and reliever airports within the States and insular areas. Of this 12 percent, 99 percent is apportioned for airports within the 50 States, the District of Columbia, and Puerto Rico, while the remaining 1 percent is apportioned for airports in the insular areas (Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the Virgin Islands). Funds are apportioned for certain Alaskan airports to ensure that at least the amount they were apportioned in FY 1980 under previous grant–in–aid legislation is made available to airports in Alaska.

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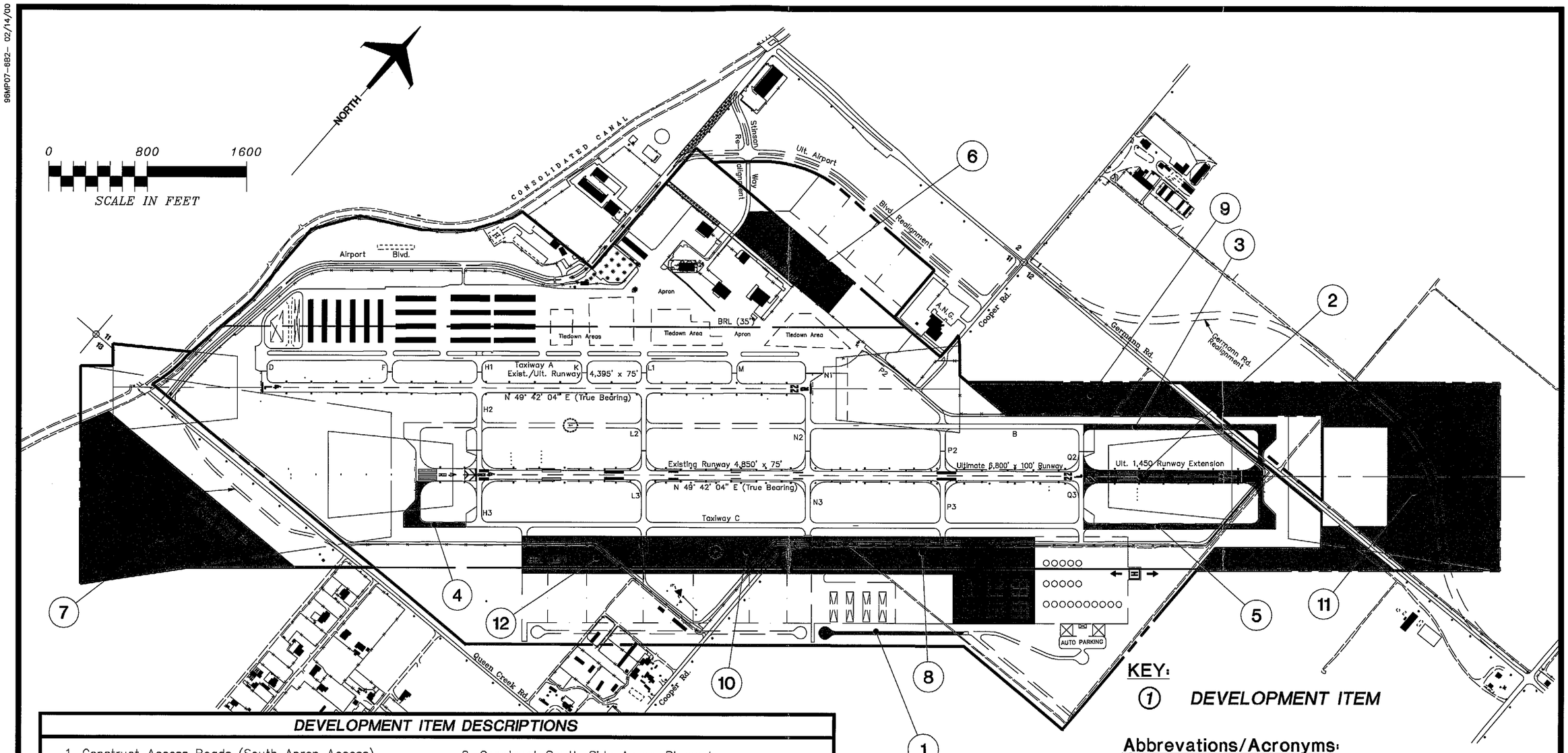

DEVELOPMENT ITEM DESCRIPTIONS

1. Construct Access Roads (South Apron Access)
2. Extend Runway 4R–22L 1,450 Feet North
3. Extend Taxiway B 1,450 Feet North
4. Extend Taxiway C 500 Feet South
5. Extend Taxiway C 1,450 Feet North
6. Construct New Apron North of Ryan Road
7. Property Acquisition South for RPZ (42 acres)
8. Construct South Side Apron–Phase I
9. Property Acquisition North for Transitional Surface (24 acres)
10. Construct South Side Apron–Phase II
11. Property Acquisition North for RPZ (41 acres)
12. Construct South Side Apron–Phase III

NOTE: Not all development items listed are depicted on this exhibit.

KEY:

(1) *DEVELOPMENT ITEM*

Abbrevations/Acronyms:

BRL – Building Restriction Line
GPS – Global Positioning System
MALSR – Medium Intensity Approach Lighting System
MIRL – Medium Intensity Runway Lighting
MITL – Medium Intensity Taxiway Lighting
PAPI – Precision Approach Path Indicator
RPZ – Runway Protection Zone
R.O.W. – Right–Of–Way

Exhibit 6B
INTERMEDIATE TERM PLANNING HORIZON IMPROVEMENTS (6 TO 10 YEARS)

96MP07-683- 02/14/00

NORTH

0 800 1600

SCALE IN FEET

CONSOLIDATED CANAL

Airport Blvd.

Ult. Airport

Stinson Re-alignment Way

Blvd. Realignment

Ryan Road

Apron

A.N.G.

Cooper Rd.

Germann Rd.

Germann Rd. Realignment

BRL (35')

Tiedown Areas

Tiedown Area

Apron

Tiedown Area

Toxiway A

Exist./Ult. Runway 4,395' x 75'

N 49° 42' 04" E (True Bearing)

Existing Runway 4,850' x 75'

Ultimate 6,800' x 100' Runway

Ult. 1,450 Runway Extension

N 49° 42' 04" E (True Bearing)

Toxiway C

Queen Creek Rd. Realignment

BRL (35')

AUTO PARKING

Queen Creek Rd.

Cooper Rd.

1 2 3 4 5 6 7

KEY:

(1) *DEVELOPMENT ITEM*

Abbrevations/Acronyms:

BRL – Building Restriction Line
GPS – Global Positioning System
MALSR – Medium Intensity Approach Lighting System
MIRL – Medium Intensity Runway Lighting
MITL – Medium Intensity Taxiway Lighting
PAPI – Precision Approach Path Indicator
RPZ – Runway Protection Zone
R.O.W. – Right–Of–Way

DEVELOPMENT ITEM DESCRIPTIONS

1. Construct South Side Terminal Roads & Extend Utilities
2. Construct Hangar Access Taxiways
3. Construct 40 T–Hangars*
4. Relocate Segmented Circle
5. Install MALSR Runway 04R
6. Construct 50 T–Hangars*
7. Install ODALS Runway 22L

NOTE: Not all development items listed are depicted on this exhibit.

Exhibit 6C
LONG RANGE PLANNING HORIZON IMPROVEMENTS
(10 TO 20 YEARS)

The remaining funds are defined as discretionary, but sizable portions are set aside to achieve specified funding minimums. A minimum (based upon a percentage of total amounts made available for AIP) of:

- Five percent of all funds is used for reliever airports;
- 1.25 percent is used for nonprimary commercial service airports;
- 12.5 percent is reserved for noise compatibility planning and implementing noise compatibility programs under Section 47501 et seq. of Title 49 U.S.C.(formerly the Aviation Safety and Noise Abatement Act of 1979);
- 0.75 percent is used for the preparation of integrated airport system plans; and
- 2.5 percent is used for the Military Airport Program.

Of the remaining discretionary funds, 75 percent is to be used for preserving and enhancing capacity, safety, security, and carrying out noise compatibility planning and programs at primary and reliever airports. The remaining 25 percent may be used for any eligible project at any airport.

Congress specified, beginning in FY 1994, that not less than $325 million remain in discretionary funds after all apportionments and set–asides are satisfied. If less than this amount remains, all apportionments (except that for Alaska supplemental funds) and set–asides are to be reduced by the same percentage so as to ensure that $325 million be available for discretionary grants.

The AIP discretionary funds are distributed by the FAA to airports based upon the priority of the project for which they have requested federal assistance. A National Priority Ranking System is used to evaluate and rank each airport project. Those projects with the highest priority are given preference in funding. Each airport project for Chandler Municipal Airport must follow this procedure and compete with other airport projects in the State for AIP State Apportionment dollars and across the country for other Federal AIP funds.

In Arizona, airport development projects that meet FAA's eligibility requirements receive 91.06 percent funding from the AIP. Eligible projects include any public use facility such as airfield and apron improvements. Revenue generating improvements such as fuel facilities and hangars are generally not eligible for AIP funding. FAA has historically not funded these types of facilities, but currently are under review by the agency for consideration as an eligible airport improvement in the future.

FAA FACILITIES AND EQUIPMENT PROGRAM

The Airway Facilities Division of the FAA administers the national Facilities and Equipment (F&E) Program. This annual program provides funding for the installation and maintenance of various navigational aids and

equipment for the national airspace system and airports. Under the F&E program, funding is provided for FAA air traffic control towers, enroute navigational aids such as the VOR, and on-airport navigational aids such as PAPI's and approach lighting systems. As activity levels and other development warrant, the airport may be considered by the FAA Airways Facilities Division for the installation and maintenance of navigational aids through the F&E program. Recommended improvements in this master plan which may be eligible for funding through the F&E program include the MALSR for Runway 04R and the ODALS for Runway 22R. Should the Airway Facilities Division of the FAA install these navigational aids at the airport, they would be operated and maintained by the FAA at no expense to the airport.

STATE AID TO AIRPORTS

State Airport Grant Program

In support of the state airport system, the State of Arizona also participates in airport improvement projects. The source for State airport improvement funds is the Arizona Aviation Fund administrated by the Arizona Department of Transportation (ADOT) Aeronautics Division. Taxes levied by the State on aviation fuel, flight property, aircraft registration tax, and registration fees, (as well as interest on these funds) are deposited in the Arizona Aviation Fund. The Transportation Board establishes the policies for distribution of these State funds.

Under the State of Arizona grant program, an airport can receive funding for one-half (4.47 percent) of the local share of projects receiving federal AIP funding. The State also provides 90 percent funding for projects, such as pavement maintenance, which are not eligible for AIP funding.

State Airport Loan Program

The Arizona Department of Transportation - Aeronautics Division (ADOT) recently established the Airport Loan Program. This program was established to enhance the utilization of State funds and provide a flexible funding mechanism to assist airports in funding improvement projects. Eligible projects include runway, taxiway, and apron improvements; land acquisition, planning studies, and the preparation of plans and specifications for airport construction projects, as well as revenue generating improvements such as hangars and fuel storage facilities. Projects which are not currently eligible for the State Airport Loan Program are considered if the project would enhance the airport's ability to be financially self-sufficient.

There are three ways in which the loan funds can be used: Grant Advance, Matching Funds, or Revenue Generating Projects. The Grant Advance loan funds are provided when the airport can demonstrate the ability to accelerate the development and construction of a multi-phase project. The project(s) must be compatible with the Airport Master Plan and be included in the ADOT 5-year Airport Development Program. The Matching

Funds are provided to meet the local matching fund requirement for securing federal airport improvement grants or other federal or state grants. The Revenue Generating funds are provided for airport-related construction projects that are not eligible for funding under another program.

LOCAL FUNDING

The balance of project costs, after consideration has been given to the various grants available, must be funded through airport resources. Usually, this is accomplished through the use of airport earnings and reserves, to the extent possible, with the remaining costs financed through bonds and leasehold financing.

Airport Operating Fund

The City of Chandler owns, operates, and manages the Chandler Municipal Airport and also plans and arranges financing of airport projects. The City operates the airport as an enterprise fund in accordance with typical accounting principles for governmental agencies. Included in the enterprise fund is the maintenance of accounts for airport operating revenues and expenses.

The airport generates several revenue categories. The majority of revenues generated at Chandler Municipal Airport is derived from fuel sales, fuel flowage fees, and hangar rentals. Other revenues include those generated by fixed leases, interest income, airport business permits, miscellaneous charges for services. For fiscal year 1997/8, airport revenues totaled $561,240.

Operation of the Chandler Municipal Airport also generates several expenditures. The largest expense categories accrued by operation of the airport included personnel salaries and supplies. Salary expenses include those for the airport manager and support staff, while most of the supply expense is derived from fuel purchases. Other operational expenses include repair/ maintenance, rents and utilities, administrative cost distributions, professional fees, and debt service. Total operations expenses for fiscal year 1997/8 were $498,860.

Cash Flow Analysis

Table 6C presents operational revenues and expenses for the past five years. **Tables 6D** and **6E** present analysis of future cash flows. It is important to note that the airport operates with a positive cash flow. This is projected to continue into the future. The net negative position reflects the costs associated with capital improvement projects.

TABLE 6C
Historical Cash Flow

	1993-4	1994-5	1995-6	1996-7	1997-8
Total Airport Operating Revenues					
Fixed Leases	$56,316	$40,834	$58,148	$71,936	$81,567
Tie-down Fees	270,198	289,033	289,098	291,955	326,652
Fuel Sales (including flowage fee)	338,716	162,302	130,447	180,213	145,248
Other Revenues	7,657	8,377	7,237	17,279	7,773
Total Operating Revenues	$672,887	$500,546	$484,930	$561,383	$561,240
Total Airport Operating Expenses					
Personal Services	$249,819	$167,646	$171,144	$159,489	$161,392
Operating Supplies	245,837	114,511	101,441	145,523	105,152
Repairs and Maintenance	102	7,369	15,280	16,611	9,774
Rents and Utilities	0	28,242	36,262	43,290	48,506
Administration Cost Distribution	72,018	74,899	78,644	0	0
Airport Operating Fund Deb Service	0	0	0	64,001	70,246
Internal Service Transfer (Debt Serv)	206,080	180,466	168,058	150,891	160,581
Miscellaneous	9,113	47,307	27,184	1,295	23,786
Total Operating Expenses	$782,969	$620,440	$598,014	$581,100	$579,437
Net Operating Income (Loss)	***($110,082)***	***($119,894)***	***($113,084)***	***($19,717)***	***($18,197)***

TABLE 6D
Five-Year Cash Flow

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
REVENUES					
Fixed Leases	$88,223	$91,752	$95,422	$99,239	$103,208
Tie-down Fees	349,918	362,165	391,138	404,828	437,214
Fuel Sales (including flowage fee)	151,116	154,138	157,221	160,365	163,572
Other Revenues	7,929	8,008	8,089	8,169	8,251
Total Operating Revenues	$597,186	$616,063	$651,869	$672,601	$712,246
EXPENSES					
Personal Services	$167,912	$171,271	$174,696	$178,190	$181,754
Operating Supplies	105,362	105,467	105,573	105,678	105,784
Repairs and Maintenance	10,069	10,220	10,374	10,529	10,687
Rents and Utilities	51,460	53,004	54,594	56,232	57,919
Airport Operating Fund Deb Service	72,370	73,455	74,557	75,675	76,810
Internal Service Transfer (Debt Serv)	162,191	163,002	163,817	164,636	165,459
Miscellaneous	24,024	24,144	24,265	24,386	24,508
Total Operating Expenses	$593,388	$600,563	$607,875	$615,327	$622,921
Net Operating Income/(Loss)	**$3,797**	**$15,500**	**$43,994**	**$57,275**	**$89,325**
CAPITAL IMPROVEMENT PROGRAM (CIP)					
Total Costs of Annual Projects	$2,310,000	$6,144,500	$4,690,500	$1,771,000	$8,977,000
FAA Funding	1,707,375	3,860,033	2,851,089	1,612,673	7,624,909
ADOT Funding	456,136	1,438,383	1,107,156	79,164	917,445
Local Share	**$146,489**	**$846,083**	**$732,256**	**$79,164**	**$434,645**
City Land Donation Funds	$56,000	$118,850	$0	$0	$0
Bond Proceeds					
Old Bonds	105,300	57,950	60,425	4,550	55,800
New Bonds	0	41,500	6,825	81,725	37,350
Bond Debt Service	10,842	21,081	28,005	36,888	46,479
Annual Income/(Loss)	**($48,233)**	**($752,214)**	**($649,017)**	**$27,498**	**($298,649)**

TABLE 6E
Intermediate Term and Long Range Cash Flow

	Intermediate Term	Long Range
ANNUAL AVERAGE REVENUES		
Fixed Leases	$116,274	$160,109
Tie-down Fees	485,321	685,141
Fuel Sales (including flowage fee)	173,652	203,781
Other Revenues	8,502	9,210
Total Annual Operating Revenues	$783,750	$1,058,241
ANNUAL AVERAGE EXPENSES		
Personal Services	$192,954	$226,431
Operating Supplies	106,102	106,954
Repairs and Maintenance	11,178	12,603
Rents and Utilities	63,345	80,524
Internal Service Transfer (Debt Serv)	80,337	90,579
Miscellaneous	167,958	174,812
Total Annual Average Operating Expenses	$621,873	$691,903
Net Operating Income/(Loss)	***$161,877***	***$366,338***
ANNUAL AVERAGE CAPITAL IMPROVEMENT PROGRAM (CIP)		
Total Costs of Annual Average Projects	$4,709,480	$1,084,700
Annual Average FAA Funding	4,288,452	169,264
Annual Average ADOT Funding	210,514	410,118
Annual Average Local Share	$210,514	$505,318
Annual Average Bond Proceeds	$0	$0
Annual Average Bond	46,479	32,149
Annual Average Income/(Loss)	($95,116)	($171,129)

Financing Infrastructure Improvements

There are several municipal bonding options available to the City of Chandler including: general obligation bonds, limited obligation bonds, and revenue bonds. General obligation bonds are a common form of municipal bond which is issued by voter approval

and is secured by the full faith and credit of the City. City tax revenues are pledged to retire the debt. As instruments of credit, and because the community secures the bonds, general obligation bonds reduce the available debt level of the community. Due to the community pledge to secure and pay general obligation bonds, they are the most secure type of municipal bond and are generally issued at lower interest rates and carry lower costs of issuance. The primary disadvantage of general obligation bonds are that they require voter approval and subject to statutory debt limits. This requires that they be used for projects that have broad support among the voters, and they be reserved for projects that have the highest public priorities.

In contrast to general obligation bonds, limited obligation bonds (sometimes referred to as a Self Liquidating Bonds) are secured by revenues from a local source. While neither general fund revenues nor the taxing power of the local community is pledged to pay the debt service, these sources may be required to retire the debt if pledged revenues are insufficient to make interest and principal payments on the bonds. These bonds still carry the full faith and credit pledge of the local community and therefore are considered, for the purpose of financial analysis, as part of the debt burden of the local community. The overall debt burden of the local community is a factor in determining interest rates on municipal bonds.

There are several types of revenue bonds, but in general they are a form of municipal bond which is payable solely from the revenue derived from the operation of a facility that was constructed or acquired with the proceeds of the bonds. For example, a Lease Revenue Bond is secured with the income from a lease assigned to the repayment of the bonds. Revenue bonds have become a common form of financing airport improvements. Revenue bonds present the opportunity to provide those improvements without direct burden to the taxpayer. Revenue bonds normally carry a higher interest rate, lacking the guarantees of general and limited obligation bonds.

Leasehold financing refers to a developer or tenant financing improvements under a long-term ground lease. The obvious advantage of such an arrangement is that it relieves the community of all responsibility for raising the capital funds for improvements.

The private development of facilities on a ground lease, particularly on property owned by a municipal agency, produces a unique set of problems. It is more difficult to obtain private financing as only the improvements and the right to continue the lease can be claimed in the event of a default. Ground leases normally provide for the reversion of improvements to the lessor at the end of the lease term, which reduces their potential value to a lender taking possession. Also, companies that want to own their property as a matter of financial policy may not locate where land is only available for lease.

Master ground leases offer a substantial financial advantage to a private developer as there are not any up-front

acquisition costs and lease payments are fully deductible for tax purposes; whereas, owned land cannot be depreciated. This option could be structured as a straight ground lease or as a joint venture. Under a straight ground lease to a developer, the City would not be involved in the construction, financing, sale, or lease of buildings for tenants. However, there may be circumstances where the City will want to participate in the construction of facilities, either as part of a joint venture or to provide inducements to attract certain tenants. The simplest way to do this is to underwrite the construction and financing of those facilities, keeping them in City ownership and leasing them to tenants.

As a joint venture partner, the City would provide funds for construction and permanent financing. A joint venture could be structured so that the various benefits would be available for each partner according to their highest use; for example: tax benefits (such as depreciation) would go to the private developer while cash income would go to the City. This could be used successfully to fund individual buildings for specific tenants, where lower rents could be charged in exchange for partial ownership, producing income from both rents and interest payments.

These financing techniques offer marketing inducements, as they assume the City can obtain lower-cost funds than are available in the private market. These lower costs can then be passed through to the development process to reduce lower rental rates. To avoid the appearance of unfairly competing with the private sector, it will be important to establish comparable market rental rates.

SUMMARY

The best means of beginning the implementation of recommendations of this master plan is to first recognize that planning is a continuous process that does not end with completion of the master plan. Rather, the ability to continuously monitor the existing and forecast status of airport activity must be provided and maintained. The basic issues upon which this master plan is based will remain valid for several years. As such, the primary goal is for the airport to evolve into a facility that will best serve the air transportation needs of the region and to evolve into a self-supporting economic generator for the City of Chandler.

Toward meeting this goal, successful implementation of airport improvement projects will require sound judgement by the City of Chandler. Among the more important factors influencing the decision to carry out a specific improvement are timing and airport activity. Both factors should be used as references in the implementation of the master plan. In this master plan, focusing on the timing of airport improvements was necessary. However, the actual need for facilities is more appropriately established by airport activity levels rather than a specified date.

For example, projections have been made as to when additional T-hangar facilities would be needed to

accommodate based aircraft growth. However, in reality, the time frame in which additional facilities are needed may be substantially different. Actual demand may be slow in reaching forecast activity levels. On the other hand, increased based aircraft totals may establish the need for new facilities much sooner. Although every effort has been made in this master planning process to conservatively estimate when facility development may be needed, aviation demand will dictate when facility improvements need to be accelerated or delayed.

The real value of a usable master plan is that it keeps the issues and objectives in the mind of the user so that he or she is better able to recognize change and its effect. In addition to adjustments in aviation demand, decisions made as to when to undertake recommended improvements in this master plan will impact the period that the plan remains valid. The format used in this plan is intended to reduce the need for costly updates. Updating can be done by the user, improving the plan's effectiveness.

In summary, the planning process requires the City of Chandler to consistently monitor the progress of the airport in terms of total aircraft operations, total based aircraft, and overall aviation activity. Analysis of aircraft demand is critical to the exact timing and need for new airport facilities. The information obtained from continually monitoring airport activity will provide the data necessary to determine if the development schedule should be accelerated or delayed.